

## Analytic Enclave Product: Overview

### Washington All Payer Claims Database (WA-APCD)

#### Introduction

The Analytic Enclave product (“Product”) is a secure, cloud-based analytic environment that enables secure access to the all-payer data, added-value data augmentation services and a set of analytic tools. The Enclave product, hosted by Amazon Web Services (AWS), is managed by the WA-APCD data vendor, Onpoint Health Data.

#### Healthcare Data

At Product go-live, the complete WA-APCD all-payer dataset is comprised of ~4.1 million covered lives.

	Total	Commercial	Medicaid	Medicare Advantage*	Medicare Fee-for-Service**
WA-APCD	4.1m lives	~1.85m lives	~1.85m lives	~320,000 lives	No lives
State of Washington Residents (2017 insured)	6.6m lives	~3.4m lives	~1.85m lives	~400,000 lives	~890,000 lives
WA-APCD % Total	62%	53%	100%	80%	0%

\*Medicare Advantage data includes Pt D prescription drug data for both MA and Medicare fee-for-service coverage. Medicare fee-for-service population to be added to WA-APCD in 2019

Health and dental insurers and payers, including Medicaid, supply these data to the WA-APCD – upwards of 40 payers supply enrollment, medical claims, prescription drug claims, and dental claims data. The Washington Department of Labor and Industries workers’ compensation data will be added in Fall 2018.

Data for three populations are not included in the WA-APCD: i) commercial self-funded enrollees, ii) Medicare fee-for-service beneficiaries, and iii) populations covered under federal programs including Veterans Administration, Dept. of Defense, Indian Health Services, and the Federal Employees Health Benefits Program.

These core data have been cleaned and transformed to a common format and defined data elements. Master database tables have been created with unique identifiers assigned to enrollees and providers. The data is normalized so the same values are consistently used for a given data element. Claims are de-duplicated and versioned to provide end users with the final version of the claim. Claims data are service-line level records and include a summary header record and an inpatient stay summary file. The eligibility data provides separate enrollment spans for each unique enrollee per health plan and product.

Each calendar quarter, the underlying database is refreshed to include the most recent quarter of data (enrollment and medical and prescription drugs claims).

The underlying data is available 60 days after a quarterly submission to the WA-APCD (e.g., 2QTR 2018 data is due from data suppliers by July 31, 2018; this data will be available to a data file extract by September 30, 2018).

The all-payer version of the Product includes data, covering all of Washington State, from:

1. Commercial fully insured including the Public Benefits Purchasers Board (PEBB) and the Washington Health Benefits Exchange
2. Medicaid: fee for service and managed care
3. Medicare Advantage and Pt D supplemental

### Three Versions of the Data Product

Data requestors stipulate the desired Product version in the Data Application and explain the rationale for that Product. The three versions of the Product, which are summarized in the table below, are distinguished by the:

- i) enrollee de-identification level
- ii) provider de-identification level
- iii) availability of allowed cost data

Data Set Type	Dates of Service	Paid Dates	Allowed Amount Dollars	Payer Identifiable	Provider NPI	Provider Location	Provider Specialty	Member ZIP	Member Coverage Dates
Safe Harbor	YYYY	YYYY	N	N	Y	5-digit zip	Y	3-digit	YYYY
Limited with Allowed Costs	YYYYMMDD	YYYYMMDD	Y	N	N	County/ACH	Y	5-digit	YYYYMMDD
Limited With Allowed Costs & Providers	YYYYMMDD	YYYYMMDD	Y	N	Y	5-digit zip	Y	5 digit	YYYYMMDD

**Safe Harbor Data Set** follows the HIPAA guidelines for the person identifiable data.

The Safe Harbor dataset will suppress (null values) the following data elements:

- Person identifiable data (name, DOB, address, group ID, etc.)
- Insurer ID or name
- Insured group ID or name
- Dates of service limited to year of service
- Patient geographic information limited to a 3 digit zip code tabulation area (ZCTA)

Product includes provider-specific identifiers -- provider name, address and National Provider Identification (NPI) codes. Product does not include allowed costs.

**Limited Data Set A** follows HIPAA guidelines for the person identifiable data.

The Limited Data Set A adds a core set of data elements:

- Full dates of service (MMDDYYYY)
- Patient geographic information at a 5-digit zip code level
- Provider-specific identifiers (e.g. name, address, NPI code)

**Limited Data Set B** follows HIPAA guidelines for the person identifiable data.

The Limited Data Set B adds a core set of data elements:

- Full dates of service (MMDDYYYY)
- Patient geographic information at a 5-digit zip code level
- Provider-specific identifiers (e.g. name, address, NPI code)
- Allowed cost amounts (e.g. insurer paid and enrollee cost share amounts)

### Data Model: Organization of the Data

The data is organized into a series of data tables, which are listed in separate attachment [Data Element List\\_3 Extract Versions V1.0.xls](#) to include:

1. Medical Claim Detail
2. Pharmacy Claim Detail
3. Eligibility Table
4. Provider Master Table
5. See Appendix for additional tables such as supporting reference tables

6. Dental data will be available beginning September 30, 2017
7. The complete data element set is listed in: Data Element List\_3 Extract Versions\_V1.0

For Product users who seek to refresh the data regularly or periodically:

- Each calendar quarter, the Product database will be refreshed to include the most recent quarter of data (enrollment and medical and prescription drugs claims).
- Data is available in the Product 60 days after a quarterly submission to the WA-APCD (e.g., 2QTR 2018 data is due from data suppliers by July 31, 2018; this data will be in the Product by September 30, 2018).

Product Historical Data and Refresh Cycles Through June 2019

Claims/Eligibility Paid Dates	Data Due from Data Suppliers	Available in Product
1/1/2014 – 12/31/2017*	01/31/2018	6/30/2018
1/1/2014 – 3/31/2018	04/30/2018	6/30/2018
1/1/2014 – 6/30/2018	07/31/2018	9/30/2018
1/1/2014 – 9/30/2018	10/31/2018	12/31/2018
1/1/2014 – 12/31/2018	01/31/2019	3/31/2019
1/1/2014 – 3/31/2019	04/30/2019	6/30/2019

\*Historical data: all service dates January 2014 – December 2017 and paid dates through March 31, 2018

### WA-APCD Data Augmentation

Contingent on the version of the three standard datasets, the Product may include the following:

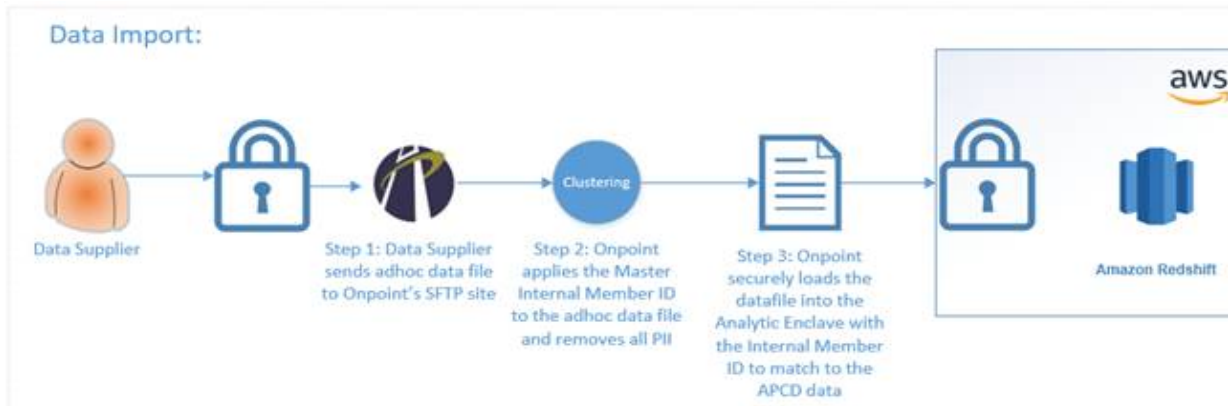
- Master patient index to link patients across payers and time
- Member months for financial and utilization analytics
- Type of service flags to delineate lab, x-ray, outpatient surgery, preventive visits, etc.
- Master provider table with provider identifiers (e.g. (NPIs, taxonomy codes)
- Primary care practitioner assignment to medical practice based on patient attribution to practitioner
- Person Level Report: per person cost, utilization rates, Clinical Risk Groups (CRGs) and other values per PMP Person-Level Report\_Specification\_V5.0
- Inpatient stay MS-DRGs

## Data Import and Export Services

**Data Export** Client, per the terms of its data use agreement, can export data and analytics from the Enclave. Per this illustration, client designates a Reviewer to assess information that has been pended for download. Once the data download is approved, client exports the data to its local environment.



**Data Import:** Client, per the terms of its data use agreement which includes a fee for this service, can import data into the Enclave. Per this illustration, client sends its data file(s) to the Onpoint SFTP site. Onpoint matches client direct identifiers with WA-APCD Master Patient Identifiers and assigns the WA-APCD unique ID to each person, removing the direct identifiers. Last, Onpoint loads the client data file, with the WA-APCD unique ID assignment, into the client's Enclave.



## User Interface and Software Tools

Client has remote desktop access to a customized Enclave environment.

- Windows 7 or Windows 10 desktop is used to access the Enclave using the AWS Workspaces cloud-based virtual desktop. A user connects to a WorkSpace using the WorkSpaces client application or the Chrome or Firefox web browsers.
- The Enclave supported devices are: Windows and Mac computers, Chromebooks, iPads, Fire and Android tablets.

All remote desktop data is encoded and encrypted in the cloud prior to being transferred over the Internet using the secure PC over IP (PCoIP) protocol. The client-side application then decodes and decrypts the data.

Three main software applications support Enclave analytic users:

- Columnar database using AWS Redshift
- SQL workbench for querying data
- R Studio statistical and graphing software

Onpoint client support: (24 x7) help desk service at phone (844) 207-6383 (toll-free); email (7AM – 7PM Eastern) at [ae-support@onpointhealthdata.org](mailto:ae-support@onpointhealthdata.org)

Clients have the option, for a buy-up fee, to add analytic software like SAS to the Enclave.

## Hosting and Security

The Enclave is hosted by Onpoint, which is HITRUST certified and HIPAA compliant. The Enclave shall be deployed in a secure, WA-APCD-dedicated virtual private cloud hosted using a HIPAA Account through Amazon Web Services (AWS) using AWS Workspaces and AWS Directory Service.

Users access the environment via a virtual desktop over a secure PC over IP (PCoIP) protocol which requires two-factor authentication.

Data is encrypted in transit and at rest.

Web browsing from the Enclave is strictly limited to prevent any malicious software from entering the environment. By default, web browsing is prohibited, but can be enabled if needed by the client.

Patching is performed at least monthly.

Third-party penetration testing is conducted at least annually.

Backups are performed every 12 hours.

Onpoint maintains copies of all of the Enclave source data, which Onpoint has loaded into the Enclave per the quarterly extract process, beginning with January 1, 2014, data in a separate repository outside of the Enclave. All end-user created data is backed-up for a 30-day period.

### Primary Care Attribution

The patient attribution to primary care practitioner (PCP) and assignment of that practitioner to a medical practice, which is an important component of the Product data augmentation, is accomplished through the following steps.

To designate a primary care practitioner, WA-APCD uses CMS's definition of a primary care practitioner plus naturopathic medicine (Appendix: Table 1). The following three specialty types, which are not CMS listed PCP specialties, are not designated as primary care practitioners for the WA-APCD:

1. Homeopathy: based on the WA-APCD data, no homeopaths were categorized as a patient's primary care practitioner due to lower volumes of evaluation and management office visits
2. Obstetrics/gynecology: it's unclear how many woman use an obgyn as their primary care practitioner in Washington; to be assessed in future
3. Physical medicine: these physicians, also called physiatrists, concentrate on patients whose medical conditions concern the brain, spinal cord, nerves, bones, joints, ligaments, muscles and tendons. While physiatrists are trained to treat the whole patient it is unlikely that many serve as a primary care practitioner or that physical medicine practices of four or more practitioners operate as primary care practices.

A primary care practitioner is identified by the taxonomy code billed on the claim or by CMS National Plan and Provider Enumeration System (NPPES) data for that provider that matches one of the WA-APCD designated PCP taxonomy codes.

A patient is assigned to the PCP with the plurality of that patient's evaluation and management visits in the most recent 24 month period. If a tie, the patient is assigned to the PCP whom they visited most recently; if still a tie then patient is assigned to the PCP with the highest total claims allowed amount for that patient. Attribution of patients to primary care practitioners uses all data across market segments – attribution is not done separately by market segment.

Once the patient to PCP attribution is completed the practitioner is assigned to a medical practice. This is done using a provider to medical practice roster. If a provider belongs to multiple practices during the time period, the assignment is based on roster information designating the primary practice. In the absence of roster primary practice information, the provider is assigned to the practice where the most current services rendered.

A practitioner may be unassigned to a primary care practice for one of several reasons:

1. No medical practice affiliation records were received from Onpoint’s data service for the NPI of that provider (rare)
2. The identified practice did not represent a medical practice (e.g., entity was a hospital department/lab/dentist etc.)
3. The provider had an affiliation to a practice but that practice is comprised of fewer than 4 practitioners each of whom must have a minimum of 150 patient attributed (note that if a practice did include at least 4 providers with 150 attributed patients each, we include every other provider belonging to the practice regardless of attributed patient count)

### WA-APCD Data Generalizability

The following two tables show the distribution of WA-APCD lives by age and geographic region -- Accountable Community for Health areas.

WA-APCD Covered Lives Distribution by Accountable Community for Health Region

Accountable Community for Health	Washington Population	% Statewide	WA-APCD Commercial Lives	% Commercial Lives	WA-APCD Medicaid Lives (MCOs)	% Medicaid Lives (MCOs)
BETTER HEALTH TOGETHER	587,770	0.08	105,095	0.07	152,095	0.10
CASCADE PACIFIC ACTION ALLIANCE	614,750	0.09	134,015	0.09	148,532	0.10
GREATER COLUMBIA ACH	710,850	0.10	135,079	0.09	200,441	0.13
KING COUNTY ACH	2,105,100	0.29	459,267	0.32	332,007	0.22
NORTH CENTRAL ACH	252,970	0.04	47,700	0.03	44,041	0.03
NORTH SOUND ACH	1,206,900	0.17	278,953	0.19	293,167	0.20
OLYMPIC COMMUNITY OF HEALTH	367,090	0.05	56,334	0.04	50,586	0.03
PIERCE COUNTY ACH	844,490	0.12	143,946	0.10	169,881	0.11
SOUTHWEST WASHINGTON ACH	493,780	0.07	77,587	0.05	109,087	0.07
Total	7,183,700	1	1,437,977	1	1,499,837	1

Covered lives count is a subset of WA-APCD total covered lives that were used in the 2016 measurement year quality measures scoring; missing lives include enrollees not attributed to a PCP; Medicare Advantage and Pt D lives and Medicaid fee-for-service lives.



WA-APCD Covered Lives Distribution by Age 0-64

Age Category	Statewide Persons (2017)	Statewide Age %	WA-APCD Age % (Total)	WA-APCD Commercial (Age 0-64)	WA-APCD Commercial Age %	WA-APCD Medicaid MCOs (Age 0-64)	WA-APCD Medicaid MCOs Age %
0-4	454,134	0.07	0.09	80,118	0.05	228,152	0.14
5-9	465,666	0.08	0.09	84,014	0.05	224,357	0.14
10-14	457,106	0.07	0.08	91,683	0.05	194,772	0.12
15-19	457,272	0.07	0.08	105,185	0.06	167,062	0.10
20-24	487,273	0.08	0.08	141,942	0.08	126,526	0.08
25-29	511,429	0.08	0.09	162,681	0.09	146,646	0.09
30-34	507,984	0.08	0.08	160,126	0.09	121,482	0.07
35-39	493,413	0.08	0.07	152,973	0.09	96,453	0.06
40-44	445,981	0.07	0.06	143,004	0.08	72,938	0.04
45-49	476,966	0.08	0.07	157,566	0.09	72,561	0.04
50-54	471,227	0.08	0.07	158,181	0.09	70,861	0.04
55-59	494,255	0.08	0.07	166,912	0.09	66,778	0.04
60-64	465,815	0.08	0.07	167,652	0.09	55,095	0.03
0-64	6,188,521		3,415,720	1,772,037		1,643,683	
65+	1,121,779	0.15					

Covered lives count is a subset of WA-APCD total covered lives that were used in the 2016 measurement year quality measures scoring; missing lives include enrollees not attributed to a PCP; Medicare Advantage and Pt D lives and Medicaid fee-for-service lives.

## WA-APCD Data Element Limitations/Availability

The WA-APCD does not report every data element that is included in its data submission guide because of data limitations. Several data element limitations are listed in the following table; for details on all data elements see the complete data element list (separate attachment).

Data Element Limitation	Explanation
Payer-specific identifiers	Payer/insurer identifier generally not available except per Institutional Review Board (IRB) approved research
Insured-group specific identifiers	Insured group name and IDs generally not available except per Institutional Review Board (IRB) approved research
Member direct identifiers	Member name, SSN, date-of-birth and other direct identifiers generally not available except per Institutional Review Board (IRB) approved research
Member street address	No street addresses (zip code and ACH region are available)
Member race	Not usable due to missing data
Member ethnicity	Not usable due to missing data
Third-party liability or supplemental insurance	Excluded from WA-APCD dataset
Coverage type	~ 60% of records are "other" – given mix of private and public sponsored insurance programs. This field categorizes member by coverage type (e.g. insured, self-insured, association plan)
Substance use disorder claims	Incomplete data given federal privacy protections
Prescription drug mail order flag	~ 7% of records are null

## Product Pricing

The Product prices are shown in the fee schedule attachment.

## Appendix: Primary Care Practitioner Specialty Codes

SPECIALTY_CODE	TAXONOMY_PROVIDER_TYPE	SPECIALTY_DESC	TAXONOMY_SPECIALIZATION_AREA
207QA0000X	Allopathic & Osteopathic Physicians	Family Medicine	Adolescent Medicine
207Q0000X	Allopathic & Osteopathic Physicians	Family Medicine	
207QG0300X	Allopathic & Osteopathic Physicians	Family Medicine	Geriatric Medicine
207QA0505X	Allopathic & Osteopathic Physicians	Family Medicine	Adult Medicine
208D0000X	Allopathic & Osteopathic Physicians	General Practice	
207RG0300X	Allopathic & Osteopathic Physicians	Internal Medicine	Geriatric Medicine
207RA0000X	Allopathic & Osteopathic Physicians	Internal Medicine	Adolescent Medicine
207R0000X	Allopathic & Osteopathic Physicians	Internal Medicine	
2080A0000X	Allopathic & Osteopathic Physicians	Pediatrics	Adolescent Medicine
20800000X	Allopathic & Osteopathic Physicians	Pediatrics	
261QP2300X	Ambulatory Health Care Facilities	Clinic/Center	Primary Care
261QR1300X	Ambulatory Health Care Facilities	Clinic/Center	Rural Health
261QF0400X	Ambulatory Health Care Facilities	Clinic/Center	Federally Qualified Health Center (FQHC)
175F0000X	Other Service Providers	Naturopath	
364SF0001X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Family Health
364SG0600X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Gerontology
364SP0200X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Pediatrics
364SA2200X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Adult Health
363LF0000X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Family
363L0000X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	
363LA2200X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Adult Health
363LG0600X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Gerontology
363LP2300X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Primary Care
363LP0200X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Pediatrics
363AM0700X	Physician Assistants & Advanced Practice Nursing Providers	Physician Assistant	Medical
363A0000X	Physician Assistants & Advanced Practice Nursing Providers	Physician Assistant	

## Appendix: Data Model Tables

Table Name	Tab Name	Safe Harbor	Limited Use A	Limited Use B
aid_category	<a href="#">reference tables</a>	Y	Y	Y
aprdrg_output_multi_ver	<a href="#">drg_apr_ms</a>	Y	Y	Y
claim_status	<a href="#">reference tables</a>	Y	Y	Y
claim_type	<a href="#">reference tables</a>	Y	Y	Y
compound_drug_code	<a href="#">reference tables</a>	Y	Y	Y
coverage_level	<a href="#">reference tables</a>	Y	Y	Y
coverage_type	<a href="#">reference tables</a>	Y	Y	Y
discharge_status	<a href="#">reference tables</a>	Y	Y	Y
dispense_as_written	<a href="#">reference tables</a>	Y	Y	Y
drg_ref	<a href="#">reference tables</a>	Y	Y	Y
dual_eligibility_code	<a href="#">reference tables</a>	Y	Y	Y
eligibility	<a href="#">eligibility</a>	Y	Y	Y
entitlement_code	<a href="#">reference tables</a>	N	Y	Y
exchange_metallic_tier	<a href="#">reference tables</a>	Y	Y	Y
extract_data	<a href="#">reference tables</a>	Y	Y	Y
generic_drug_ind	<a href="#">reference tables</a>	Y	Y	Y
inpatient_stay_summary	<a href="#">inpatient stay summary</a>	Y	Y	Y
medical_claim_header	<a href="#">medical claim header</a>	Y	Y	Y
medical	<a href="#">medical</a>	Y	Y	Y
medical_crosswalk	<a href="#">medical crosswalk</a>	Y	Y	Y
medicare_advantage	<a href="#">reference tables</a>	N	Y	Y
medicare_status	<a href="#">reference tables</a>	N	Y	Y
network_indicator	<a href="#">reference tables</a>	Y	Y	Y
payment_arrangement_ind	<a href="#">reference tables</a>	N	Y	Y
pharmacy	<a href="#">pharmacy</a>	Y	Y	Y
place_of_setting	<a href="#">reference tables</a>	Y	Y	Y
primary_insurance_indicator	<a href="#">reference tables</a>	Y	Y	Y
product_code	<a href="#">reference tables</a>	Y	Y	Y
provider	<a href="#">provider</a>	N	N	Y
provider_master	<a href="#">provider master</a>	Y	Y	Y
specialty	<a href="#">reference tables</a>	N	N	Y
submitter	<a href="#">reference tables</a>	N	N	N
subscriber_relationship	<a href="#">reference tables</a>	Y	Y	Y
type_of_setting	<a href="#">reference tables</a>	Y	Y	Y
zip	-	Y	Y	Y
zip_group	-	Y	Y	Y

## Custom Report Product: Overview

### Washington All Payer Claims Database (WA-APCD)

#### Introduction

Analytic report products are client-customized analytics whose cost is based on the labor hours for the product design, programming, generation and reporting. The product serves the needs of organizations that want the WA-APCD to conduct an analysis of particular WA-APCD data to address the client's analytic interests.

The analytic report product characteristics include:

- Analytic results are summarized and may include summary data output
- Summary level data only – not service line level records
- May include augmented data like applying groupers to create episodes/bundles, assigning providers to accountable entities, stratifying patients by severity of illness, etc.

#### Report Specifications Development

Client applicants should:

1. Review the general parameters of the WA-APCD data and the product pricing which are summarized below
2. Schedule a phone session with the Lead Organization to clarify analytic needs and key assumptions
3. Complete the Data Element Request Form to specify the data for the analytics

The Lead Organization is available to guide the client applicant in completing these initial steps – see the contact information below.

#### Healthcare Data

At Product go-live, the complete WA-APCD all-payer dataset is comprised of ~4.1 million covered lives.

	Total	Commercial	Medicaid	Medicare Advantage*	Medicare Fee-for-Service**
WA-APCD	4.1m lives	~1.85m lives	~1.85m lives	~320,000 lives	No lives
State of Washington Residents (2017 insured)	6.6m lives	~3.4m lives	~1.85m lives	~400,000 lives	~890,000 lives
WA-APCD % Total	62%	53%	100%	80%	0%

\*Medicare Advantage data includes Pt D prescription drug data for both MA and Medicare fee-for-service coverage. Medicare fee-for-service population to be added to WA-APCD in 2019

Health and dental insurers and payers, including Medicaid, supply these data to the WA-APCD – upwards of 40 payers supply enrollment, medical claims, prescription drug claims, and dental claims data. The Washington Department of Labor and Industries workers' compensation data will be added in Fall 2018.

Data for three populations are not included in the WA-APCD: i) commercial self-funded enrollees, ii) Medicare fee-for-service beneficiaries, and iii) populations covered under federal programs including Veterans Administration, Dept. of Defense, Indian Health Services, and the Federal Employees Health Benefits Program.

These core data have been cleaned and transformed to a common format and defined data elements. Master database tables have been created with unique identifiers assigned to enrollees and providers. The data is normalized so the same values are consistently used for a given data element. Claims are de-duplicated and versioned to provide end users with the final version of the claim. Claims data are service-line level records and include a summary header record and an inpatient stay summary file. The eligibility data provides separate enrollment spans for each unique enrollee per health plan and product.

Each calendar quarter, the underlying database is refreshed to include the most recent quarter of data (enrollment and medical and prescription drugs claims). Clients have the option of purchasing a single, one-time dataset or a subscription to include an initial dataset and quarterly updates.

The underlying data is available 60 days after a quarterly submission to the WA-APCD (e.g., 2QTR 2018 data is due from data suppliers by July 31, 2018; this data will be available to a data file extract by September 30, 2018).

## For More Information

Contact the WA-APCD lead organization, the Center for Health Services Effectiveness at Oregon Health Sciences University:

Phone: 503-494-1454

Email: [wa-apcd@ohsu.edu](mailto:wa-apcd@ohsu.edu)

Website: [www.ohsu.edu/wa-apcd](http://www.ohsu.edu/wa-apcd)

## Product Pricing

Typically, the custom analytic report fee ranges from \$7,500 to \$17,500 based on a \$175 hourly rate for report development.

Following client request submission, a flat fee (e.g. \$1,200) is charged for the report design and development – this fee is credited to the client and deducted from the total cost of the report. If the client business requirements are sufficiently defined in its report request and a subsequent 1-2 hour design session then no up-front report design and development fee is assessed. The report design and development fee is not assessed if the client chooses not to proceed with the product purchase at the close of this initial 1-2 hour design session. The client must pay the full design and development fee if the product development work proceeds beyond the initial design session regardless of the client's product purchase decision.

## WA-APCD Data Element Limitations/Availability

The WA-APCD does not report every data element that is included in its data submission guide because of data limitations. Several data element limitations are listed in the following table; for details on all data elements see the Data Element Request form.

Data Element Limitation	Explanation
Payer-specific identifiers	Payer/insurer identifier generally not available except per Institutional Review Board (IRB) approved research
Insured-group specific identifiers	Insured group name and IDs generally not available except per Institutional Review Board (IRB) approved research
Member direct identifiers	Member name, SSN, date-of-birth and other direct identifiers generally not available except per Institutional Review Board (IRB) approved research
Member street address	No street addresses (zip code and ACH region are available)
Member race	Not usable due to missing data
Member ethnicity	Not usable due to missing data
Third-party liability or supplemental insurance	Excluded from WA-APCD dataset
Coverage type	~ 60% of records are "other" – given mix of private and public sponsored insurance programs. This field categorizes member by coverage type (e.g. insured, self-insured, association plan)
Substance use disorder claims	Incomplete data given federal privacy protections
Prescription drug mail order flag	~ 7% of records are null

## Data File Extract Product: Overview

### Washington All Payer Claims Database (WA-APCD)

#### Introduction

The data file extract product (“Product”) is a stand-alone information dataset that is delivered to the client via secure file transfer protocol (SFTP) which is encrypted using the OpenPGP standard. The Product serves the needs of organizations with analytic capabilities that seek to intake a WA-APCD data product organized at the claims service-line records level.

#### Healthcare Data

At Product go-live, the complete WA-APCD all-payer dataset is comprised of ~4.1 million covered lives.

	Total	Commercial	Medicaid	Medicare Advantage*	Medicare Fee-for-Service**
WA-APCD	4.1m lives	~1.85m lives	~1.85m lives	~320,000 lives	No lives
State of Washington Residents (2017 insured)	6.6m lives	~3.4m lives	~1.85m lives	~400,000 lives	~890,000 lives
WA-APCD % Total	62%	53%	100%	80%	0%

\*Medicare Advantage data includes Pt D prescription drug data for both MA and Medicare fee-for-service coverage. Medicare fee-for-service population to be added to WA-APCD in 2019

Health and dental insurers and payers, including Medicaid, supply these data to the WA-APCD – upwards of 40 payers supply enrollment, medical claims, prescription drug claims, and dental claims data. The Washington Department of Labor and Industries workers’ compensation data will be added in Fall 2018.

Data for three populations are not included in the WA-APCD: i) commercial self-funded enrollees, ii) Medicare fee-for-service beneficiaries, and iii) populations covered under federal programs including Veterans Administration, Dept. of Defense, Indian Health Services, and the Federal Employees Health Benefits Program.

These core data have been cleaned and transformed to a common format and defined data elements. Master database tables have been created with unique identifiers assigned to enrollees and providers. The data is normalized so the same values are consistently used for a given data element. Claims are de-duplicated and versioned to provide end users with the final version of the claim. Claims data are service-line level records and include a summary



header record and an inpatient stay summary file. The eligibility data provides separate enrollment spans for each unique enrollee per health plan and product.

Each calendar quarter, the underlying database is refreshed to include the most recent quarter of data (enrollment and medical and prescription drugs claims). Clients have the option of purchasing a single, one-time dataset or a subscription to include an initial dataset and quarterly updates.

The underlying data is available 60 days after a quarterly submission to the WA-APCD (e.g., 2QTR 2018 data is due from data suppliers by July 31, 2018; this data will be available to a data file extract by September 30, 2018).

The all-payer version of the Product includes data from:

1. Commercial fully insured including the Public Benefits Purchasers Board (PEBB) and the Washington Health Benefits Exchange
2. Medicaid: fee for service and managed care
3. Medicare Advantage and Pt D supplemental

## Data Product Parameters

The Product is organized and sold by the following parameters.

1. All-payer (commercial, Medicaid, Medicare Advantage)
  2. Commercial only
  3. Medicaid only
  4. Medicare Advantage only
- II. Calendar year(s) and calendar quarters comprised of claims and enrollment records for 12-month periods beginning January 2014 through the most current year (2017) and for calendar quarters beginning with 1QTR 2018
- III. Geographic area: statewide

## Three Versions of the Data Product

Data requestors stipulate the desired Product version in the Data Application and explain the rationale for that Product. The three versions of the Product, which are summarized in the table below, are distinguished by the:

- i) enrollee de-identification level
- ii) provider de-identification level
- iii) availability of allowed cost data

Data Set Type	Dates of Service	Paid Dates	Allowed Amount Dollars	Payer Identifiable	Provider NPI	Provider Location	Provider Specialty	Member ZIP	Member Coverage Dates
Safe Harbor	YYYY	YYYY	N	N	Y	5-digit zip	Y	3-digit	YYYY
Limited with Allowed Costs	YYYYMMDD	YYYYMMDD	Y	N	N	County/ACH	Y	5-digit	YYYYMMDD
Limited With Allowed Costs & Providers	YYYYMMDD	YYYYMMDD	Y	N	Y	5-digit zip	Y	5 digit	YYYYMMDD

**Safe Harbor Data Set** follows the HIPAA guidelines for the person identifiable data.

The Safe Harbor dataset will suppress (null values) the following data elements:

- Person identifiable data (name, DOB, address, group ID, etc.)
- Insurer ID or name
- Insured group ID or name
- Dates of service limited to year of service
- Patient geographic information limited to a 3 digit zip code tabulation area (ZCTA)

Product includes provider-specific identifiers -- provider name, address and National Provider Identification (NPI) codes. Product excludes allowed costs.

**Limited Data Set A** follows HIPAA guidelines for the person identifiable data.

The Limited Data Set A adds a core set of data elements:

- Full dates of service (MMDDYYYY)
- Patient geographic information at a 5-digit zip code level
- Provider-specific identifiers (e.g. name, address, NPI code)

**Limited Data Set B** follows HIPAA guidelines for the person identifiable data.

The Limited Data Set B adds a core set of data elements:

- Full dates of service (MMDDYYYY)
- Patient geographic information at a 5-digit zip code level
- Provider-specific identifiers (e.g. name, address, NPI code)
- Allowed cost amounts (e.g. insurer paid and enrollee cost share amounts)

## Data Model: Organization of the Data

The data is organized into a series of data tables, which are listed in separate attachment [Data Element List\\_3 Extract Versions\\_V1.0.xls](#) to include:

1. Medical Claim Detail
2. Pharmacy Claim Detail
3. Eligibility Table
4. Provider Master Table
5. See Appendix for additional tables such as supporting reference tables
6. Dental data will be available beginning September 30, 2017
7. The complete data element set is listed in: [Data Element List\\_3 Extract Versions\\_V1.0](#)

For Product users who seek to refresh the data regularly or periodically:

- Each calendar quarter, the Product database will be refreshed to include the most recent quarter of data (enrollment and medical and prescription drugs claims).
- Data is available in the Product 60 days after a quarterly submission to the WA-APCD (e.g., 2QTR 2018 data is due from data suppliers by July 31, 2018; this data will be in the Product by September 30, 2018).

### Product Historical Data and Refresh Cycles Through June 2019

Claims/Eligibility Paid Dates	Data Due from Data Suppliers	Available in Product
1/1/2014 – 12/31/2017*	01/31/2018	6/30/2018
1/1/2014 – 3/31/2018	04/30/2018	6/30/2018
1/1/2014 – 6/30/2018	07/31/2018	9/30/2018
1/1/2014 – 9/30/2018	10/31/2018	12/31/2018
1/1/2014 – 12/31/2018	01/31/2019	3/31/2019
1/1/2014 – 3/31/2019	04/30/2019	6/30/2019

\*Historical data: all service dates January 2014 – December 2017 and paid dates through March 31, 2018

## WA-APCD Data Augmentation

Contingent on the version of the three standard datasets, the Product may include the following:

- Master patient index to link patients across payers and time
- Member months for financial and utilization analytics
- Type of service flags to delineate lab, x-ray, outpatient surgery, preventive visits, etc.
- Master provider table with provider identifiers (e.g. NPIs, taxonomy codes)
- Primary care practitioner assignment to medical practice based on patient attribution to practitioner
- Inpatient stay MS-DRGs

## Primary Care Attribution

The patient attribution to primary care practitioner (PCP) and assignment of that practitioner to a medical practice, which is an important component of the Product data augmentation, is accomplished through the following steps.

To designate a primary care practitioner, WA-APCD uses CMS's definition of a primary care practitioner plus naturopathic medicine (Appendix: Table 1). The following three specialty types, which are not CMS listed PCP specialties, are not designated as primary care practitioners for the WA-APCD:

1. Homeopathy: based on the WA-APCD data, no homeopaths were categorized as a patient's primary care practitioner due to lower volumes of evaluation and management office visits
2. Obstetrics/gynecology: it's unclear how many women use an obgyn as their primary care practitioner in Washington; to be assessed in future
3. Physical medicine: these physicians, also called physiatrists, concentrate on patients whose medical conditions concern the brain, spinal cord, nerves, bones, joints, ligaments, muscles and tendons. While physiatrists are trained to treat the whole patient it is unlikely that many serve as a primary care practitioner or that physical medicine practices of four or more practitioners operate as primary care practices.

A primary care practitioner is identified by the taxonomy code billed on the claim or by CMS National Plan and Provider Enumeration System (NPPES) data for that provider that matches one of the WA-APCD designated PCP taxonomy codes.

A patient is assigned to the PCP with the plurality of that patient's evaluation and management visits in the most recent 24 month period. If a tie, the patient is assigned to the PCP whom they visited most recently; if still a tie then patient is assigned to the PCP with the highest total claims allowed amount for that patient. Attribution of patients to primary care practitioners uses all data across market segments – attribution is not done separately by market segment.

Once the patient to PCP attribution is completed the practitioner is assigned to a medical practice. This is done using a provider to medical practice roster. If a provider belongs to multiple practices during the time period, the assignment is based on roster information designating the primary practice. In the absence of roster primary practice information, the provider is assigned to the practice where the most current services rendered.

A practitioner may be unassigned to a primary care practice for one of several reasons:

1. No medical practice affiliation records were received from Onpoint’s data service for the NPI of that provider (rare)
2. The identified practice did not represent a medical practice (e.g., entity was a hospital department/lab/dentist etc.)
3. The provider had an affiliation to a practice but that practice is comprised of fewer than 4 practitioners each of whom must have a minimum of 150 patient attributed (note that if a practice did include at least 4 providers with 150 attributed patients each, we include every other provider belonging to the practice regardless of attributed patient count)

### WA-APCD Data Generalizability

The following two tables show the distribution of WA-APCD lives by age and geographic region -- Accountable Community for Health areas.

#### WA-APCD Covered Lives Distribution by Accountable Community for Health Region

Accountable Community for Health	Washington Population	% Statewide	WA-APCD Commercial Lives	% Commercial Lives	WA-APCD Medicaid Lives (MCOs)	% Medicaid Lives (MCOs)
BETTER HEALTH TOGETHER	587,770	0.08	105,095	0.07	152,095	0.10
CASCADE PACIFIC ACTION ALLIANCE	614,750	0.09	134,015	0.09	148,532	0.10
GREATER COLUMBIA ACH	710,850	0.10	135,079	0.09	200,441	0.13
KING COUNTY ACH	2,105,100	0.29	459,267	0.32	332,007	0.22
NORTH CENTRAL ACH	252,970	0.04	47,700	0.03	44,041	0.03
NORTH SOUND ACH	1,206,900	0.17	278,953	0.19	293,167	0.20
OLYMPIC COMMUNITY OF HEALTH	367,090	0.05	56,334	0.04	50,586	0.03
PIERCE COUNTY ACH	844,490	0.12	143,946	0.10	169,881	0.11
SOUTHWEST WASHINGTON ACH	493,780	0.07	77,587	0.05	109,087	0.07
Total	7,183,700	1	1,437,977	1	1,499,837	1

Covered lives count is a subset of WA-APCD total covered lives that were used in the 2016 measurement year quality measures scoring; missing lives include enrollees not attributed to a PCP; Medicare Advantage and Pt D lives and Medicaid fee-for-service lives.

WA-APCD Covered Lives Distribution by Age 0-64

Age Category	Statewide Persons (2017)	Statewide Age %	WA-APCD Age % (Total)	WA-APCD Commercial (Age 0-64)	WA-APCD Commercial Age %	WA-APCD Medicaid MCOs (Age 0-64)	WA-APCD Medicaid MCOs Age %
0-4	454,134	0.07	0.09	80,118	0.05	228,152	0.14
5-9	465,666	0.08	0.09	84,014	0.05	224,357	0.14
10-14	457,106	0.07	0.08	91,683	0.05	194,772	0.12
15-19	457,272	0.07	0.08	105,185	0.06	167,062	0.10
20-24	487,273	0.08	0.08	141,942	0.08	126,526	0.08
25-29	511,429	0.08	0.09	162,681	0.09	146,646	0.09
30-34	507,984	0.08	0.08	160,126	0.09	121,482	0.07
35-39	493,413	0.08	0.07	152,973	0.09	96,453	0.06
40-44	445,981	0.07	0.06	143,004	0.08	72,938	0.04
45-49	476,966	0.08	0.07	157,566	0.09	72,561	0.04
50-54	471,227	0.08	0.07	158,181	0.09	70,861	0.04
55-59	494,255	0.08	0.07	166,912	0.09	66,778	0.04
60-64	465,815	0.08	0.07	167,652	0.09	55,095	0.03
0-64	6,188,521		3,415,720	1,772,037		1,643,683	
65+	1,121,779	0.15					

Covered lives count is a subset of WA-APCD total covered lives that were used in the 2016 measurement year quality measures scoring; missing lives include enrollees not attributed to a PCP; Medicare Advantage and Pt D lives and Medicaid fee-for-service lives.

## WA-APCD Data Element Limitations/Availability

The WA-APCD does not report every data element that is included in its data submission guide because of data limitations. Several data element limitations are listed in the following table; for details on all data elements see the complete data element list (separate attachment).

Data Element Limitation	Explanation
Payer-specific identifiers	Payer/insurer identifier generally not available except per Institutional Review Board (IRB) approved research
Insured-group specific identifiers	Insured group name and IDs generally not available except per Institutional Review Board (IRB) approved research
Member direct identifiers	Member name, SSN, date-of-birth and other direct identifiers generally not available except per Institutional Review Board (IRB) approved research
Member street address	No street addresses (zip code and ACH region are available)
Member race	Not usable due to missing data
Member ethnicity	Not usable due to missing data
Third-party liability or supplemental insurance	Excluded from WA-APCD dataset
Coverage type	~ 60% of records are "other" – given mix of private and public sponsored insurance programs. This field categorizes member by coverage type (e.g. insured, self-insured, association plan)
Substance use disorder claims	Incomplete data given federal privacy protections
Prescription drug mail order flag	~ 7% of records are null

## Product Pricing

The Product prices are shown in the fee schedule attachment.

## Appendix: Primary Care Practitioner Specialty Codes

SPECIALTY_CODE	TAXONOMY_PROVIDER_TYPE	SPECIALTY_DESC	TAXONOMY_SPECIALIZATION_AREA
207QA0000X	Allopathic & Osteopathic Physicians	Family Medicine	Adolescent Medicine
207Q0000X	Allopathic & Osteopathic Physicians	Family Medicine	
207QG0300X	Allopathic & Osteopathic Physicians	Family Medicine	Geriatric Medicine
207QA0505X	Allopathic & Osteopathic Physicians	Family Medicine	Adult Medicine
208D0000X	Allopathic & Osteopathic Physicians	General Practice	
207RG0300X	Allopathic & Osteopathic Physicians	Internal Medicine	Geriatric Medicine
207RA0000X	Allopathic & Osteopathic Physicians	Internal Medicine	Adolescent Medicine
207R0000X	Allopathic & Osteopathic Physicians	Internal Medicine	
2080A0000X	Allopathic & Osteopathic Physicians	Pediatrics	Adolescent Medicine
20800000X	Allopathic & Osteopathic Physicians	Pediatrics	
261QP2300X	Ambulatory Health Care Facilities	Clinic/Center	Primary Care
261QR1300X	Ambulatory Health Care Facilities	Clinic/Center	Rural Health
261QF0400X	Ambulatory Health Care Facilities	Clinic/Center	Federally Qualified Health Center (FQHC)
175F0000X	Other Service Providers	Naturopath	
364SF0001X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Family Health
364SG0600X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Gerontology
364SP0200X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Pediatrics
364SA2200X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Adult Health
363LF0000X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Family
363L0000X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	
363LA2200X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Adult Health
363LG0600X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Gerontology
363LP2300X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Primary Care
363LP0200X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Pediatrics
363AM0700X	Physician Assistants & Advanced Practice Nursing Providers	Physician Assistant	Medical
363A0000X	Physician Assistants & Advanced Practice Nursing Providers	Physician Assistant	



## Appendix: Data Model Tables

Table Name	Tab Name	Safe Harbor	Limited Use A	Limited Use B
aid_category	<a href="#">reference tables</a>	Y	Y	Y
aprdrg_output_multi_ver	<a href="#">drg_apr_ms</a>	Y	Y	Y
claim_status	<a href="#">reference tables</a>	Y	Y	Y
claim_type	<a href="#">reference tables</a>	Y	Y	Y
compound_drug_code	<a href="#">reference tables</a>	Y	Y	Y
coverage_level	<a href="#">reference tables</a>	Y	Y	Y
coverage_type	<a href="#">reference tables</a>	Y	Y	Y
discharge_status	<a href="#">reference tables</a>	Y	Y	Y
dispense_as_written	<a href="#">reference tables</a>	Y	Y	Y
drg_ref	<a href="#">reference tables</a>	Y	Y	Y
dual_eligibility_code	<a href="#">reference tables</a>	Y	Y	Y
eligibility	<a href="#">eligibility</a>	Y	Y	Y
entitlement_code	<a href="#">reference tables</a>	N	Y	Y
exchange_metallic_tier	<a href="#">reference tables</a>	Y	Y	Y
extract_data	<a href="#">reference tables</a>	Y	Y	Y
generic_drug_ind	<a href="#">reference tables</a>	Y	Y	Y
inpatient_stay_summary	<a href="#">inpatient stay summary</a>	Y	Y	Y
medical_claim_header	<a href="#">medical claim header</a>	Y	Y	Y
medical	<a href="#">medical</a>	Y	Y	Y
medical_crosswalk	<a href="#">medical crosswalk</a>	Y	Y	Y
medicare_advantage	<a href="#">reference tables</a>	N	Y	Y
medicare_status	<a href="#">reference tables</a>	N	Y	Y
network_indicator	<a href="#">reference tables</a>	Y	Y	Y
payment_arrangement_ind	<a href="#">reference tables</a>	N	Y	Y
pharmacy	<a href="#">pharmacy</a>	Y	Y	Y
place_of_setting	<a href="#">reference tables</a>	Y	Y	Y
primary_insurance_indicator	<a href="#">reference tables</a>	Y	Y	Y
product_code	<a href="#">reference tables</a>	Y	Y	Y
provider	<a href="#">provider</a>	N	N	Y
provider_master	<a href="#">provider master</a>	Y	Y	Y
specialty	<a href="#">reference tables</a>	N	N	Y
submitter	<a href="#">reference tables</a>	N	N	N
subscriber_relationship	<a href="#">reference tables</a>	Y	Y	Y
type_of_setting	<a href="#">reference tables</a>	Y	Y	Y
zip	-	Y	Y	Y
zip_group	-	Y	Y	Y

## Per Person Cost and Utilization Product: Overview

### Washington All Payer Claims Database (WA-APCD)

#### Introduction

The Per Person Cost and Utilization product (“Product”) is a standard dataset that is delivered to the client via secure file transfer protocol (SFTP) which is encrypted using the OpenPGP standard. The Product serves the needs of organizations interested in a pre-defined set of per person cost and utilization metrics for a patient population of interest.

#### Product highlights

- A population of covered persons is attributed to an organization or a population unit like commercial line of business
- The per person total allowed costs are reported for summary medical service categories
- The medical services utilization per 1,000 persons are reported for summary medical service categories
- Each person is assigned a health status category to support severity of illness stratifications
- Persons with select chronic illness are assigned a condition-specific flag for ~10 conditions
- Report is incurred claims experience for a calendar year with a 90-day paid claims runout

These data are provided in either an Excel or csv data format.

#### Summary and Organization of the Data

The data is organized into two tables

1. Person level table
2. Population level table

Product Tables	Demographic	Health Status	Chronic Conditions	Geographic	Medical Practice Attribution	Payer Types & Member Months	Allowed Cost	Service Utilization Per 1,000 Persons	Member Coverage Dates
Person Table	Age & gender	9 Clinical Risk Group (CRG) Flags	10 Condition Flags	County & ACH region	Anonymous Practice ID	Assigned to 1 of 4 Payer Types	19 Service Categories	9 Service Categories	Member Months Count
Population Table	Age bands & % female	Count & % Population by Each CRG	Numerator & Denominator by Condition	County & ACH region Population Counts	Count by Practice ID	Population Counts for Each of 4 Payer Types	PMPM Cost by Category	Utilization Per 1,000 by Category	Population Member Months Counts

## Patient Populations

The Product is organized by the following parameters.

### *Standard Populations*

Four insured populations, representing ~ 4 million Washingtonians, are included in the standard Product:

1. Commercial
2. Medicaid managed care
3. Medicaid fee-for-service
4. Medicare Advantage

These statewide populations can be stratified by each of the 39 Washington counties or by the 9 Accountable Community for Health regions.

### *Customized Populations*

Medical groups and practices can customize the population of interest to focus on their patients who have been attributed to the provider organization per the WA-APCD primary care attribution method (Appendix). Such patient populations consist of a sample of commercially insured patients given the WA-APCD accounts for slightly more than 50% of residents with commercial coverage statewide along with 100% of the Medicaid patients, and upwards of 80% of the Medicare Advantage patients. As such, the remaining commercial insureds, largely drawn from self-funded coverage, and people with regular Medicare fee-for-service coverage are not included in the product.

Other data clients may be interested in customizing populations by disease or treatment categories. Additionally, certain organizations can customize the data by person affinity attributes like patients treated by a provider or enrollees of an insurer.

See the fee schedule for cost to customize the Product to a client-specific population.

### Time Period

The initial Product covers services incurred during January 2017 – December 2017 with claims paid dates through March 31, 2018.

Clients have the option of purchasing a single, one-time dataset or a subscription to include an initial dataset and quarterly updates.

For Product users who seek to refresh the data regularly:

- Each calendar quarter, the Product database is refreshed to include the most recent quarter of data: enrollment and medical and prescription drugs claims
- Data is available in the Product 60 days after a quarterly submission to the WA-APCD (e.g., 2QTR 2018 data is due from data suppliers by July 31, 2018; this data will be in the Product by September 30, 2018).

### Product Initial Data and Refresh Cycles through June 2019

Claims/Eligibility Incurred Dates	Paid Through	Available in Product
1/1/2017 – 12/31/2017	03/31/2018	6/30/2018
4/1/2017 – 3/31/2018	06/30/2018	9/30/2018
7/1/2017 – 6/30/2018	09/30/2018	12/31/2018
10/1/2017 – 9/30/2018	12/31/2018	03/31/2019
1/1/2018 – 12/31/2018	03/31/2019	06/30/2019

## Health Status and Chronic Condition Assignment

Each person is assigned a health status indicator (1-9) using the 3M Clinical Risk Groups (CRG)<sup>™</sup>. The CRGs are a population classification system that uses inpatient and ambulatory diagnosis and procedure codes, pharmaceutical data and functional health status to assign each individual to a single, severity-adjusted group. CRGs describe the health status and burden of illness of individuals in a population and can help identify medically complex individuals within a population. Because 3M CRGs are patient-centric, they do not focus on specific diseases or services; rather, they account for co-morbidities and measure the health status of an individual over time.

CRG	Health Status Groups (1-9)	Base CRGs (330 total)	Description/Example of Base CRG	Severity Levels	Number of CRGs (1,408 total)
9	Catastrophic condition status	10	History of major organ transplant	4	40
8	Dominant and metastatic malignancies	30	Colon malignancy under active treatment	4	120
7	Dominant chronic disease in 3 or more organ systems	28	Diabetes mellitus, congestive heart failure, and chronic obstructive pulmonary disease	6	168
6	Significant chronic disease in multiple organ systems	78	Diabetes mellitus and congestive heart failure	6	468
5	Single dominant or moderate chronic disease	125	Diabetes mellitus	4	500
4	Minor chronic disease in multiple organ systems	1	Migraine and benign prostatic hyperplasia	4	4
3	Single minor chronic disease	50	Migraine	2	100
2	History of significant acute disease	6	Chest pains	None	6
1	Healthy/non-users	2	Healthy – no chronic health problems	None	2

Persons also may be classified as having one or more of 10 chronic conditions that are included in the Product (see Appendix).

The CRG classification and chronic condition assignments are based on claims experience during the most recent 24-month period.

## Appendix: Product Data Elements

Per Person Product: Person Level Table	Per Person Product: Summary Level Table
<b>Member Demographics</b>	<b>Population Demographics</b>
Member encrypted ID	Count of members
Time period (12 month period)	Time period (12 month period)
Member age band	Average age or age band/gender (e.g. % of females <18 etc.)
Member gender	Count female
Payer type (commercial, Medicaid MCO, Medicaid FFS, Medicare Advantage)	Payer type (commercial, Medicaid MCO, Medicaid FFS, Medicare Advantage)
Member assigned medical practice/group	Member count by medical practice/group
Member county	Member count by county
Member Accountable Community for Health	Member count by Accountable Community for Health
Member months of medical coverage	Total member months
Member months of pharmacy coverage	Total member months
Member assigned clinical risk group (CRG); 1 of 9 values	Count of members in each CRG (9 values)
<b>Targeted Conditions: Member Specific</b>	<b>Targeted Conditions: Population</b>
Diabetes	Condition member count, Denominator and numerator member count
Heart Failure	Condition member count, Denominator and numerator member count
Hypertension	Condition member count, Denominator and numerator member count
IHD	Condition member count, Denominator and numerator member count
Stroke/TIA	Condition member count, Denominator and numerator member count
ADHD	Condition member count, Denominator and numerator member count
Depression	Condition member count, Denominator and numerator member count
Asthma	Condition member count, Denominator and numerator member count
COPD	Condition member count, Denominator and numerator member count
Breast cancer	Condition member count, Denominator and numerator member count
<b>Cost Measures: Member Specific</b>	<b>Cost Measures: Population</b>
Total cost	Total Cost and PMPM Rate
Inpatient facility cost	Total Cost and PMPM Rate
Inpatient Medical	Total Cost and PMPM Rate
Inpatient Surgical	Total Cost and PMPM Rate
Inpatient Maternity and Newborn	Total Cost and PMPM Rate
Inpatient Mental & Substance	Total Cost and PMPM Rate
Inpatient Non-Acute (SNF, ICF, Rehab)	Total Cost and PMPM Rate
Outpatient facility cost	Total Cost and PMPM Rate
Hospice	Total Cost and PMPM Rate

Home Health	Total Cost and PMPM Rate
Outpatient Operating Room (surgery)	Total Cost and PMPM Rate
Outpatient Emergency Department	Total Cost and PMPM Rate
Outpatient Advanced Imaging (CT, MRI, PET)	Total Cost and PMPM Rate
Outpatient Standard Imaging	Total Cost and PMPM Rate
Outpatient Lab/Pathology	Total Cost and PMPM Rate
Professional and other cost	Total Cost and PMPM Rate
Surgery and Anesthesia	Total Cost and PMPM Rate
Emergency Department	Total Cost and PMPM Rate
Advanced Imaging	Total Cost and PMPM Rate
Standard Imaging	Total Cost and PMPM Rate
Evaluation and Management	Total Cost and PMPM Rate
Preventive Visits	Total Cost and PMPM Rate
Prescription drug cost	Total Cost and PMPM Rate
<b>Utilization Measures: Member Specific</b>	<b>Utilization Measures: Population</b>
Inpatient discharges	Total use and rate per 1,000
Inpatient days	Total use and rate per 1,000
ED visits	Total use and rate per 1,000
Primary care visits	Total use and rate per 1,000
Medical specialist visits	Total use and rate per 1,000
Surgical specialist visits	Total use and rate per 1,000
Advanced Imaging - CT scan	Total use and rate per 1,000
Advanced Imaging - MRI, PET	Total use and rate per 1,000
Prescription drug scripts	Total use and rate per 1,000

1. Members unassigned to a medical practice during a reporting period will be labeled as “unassigned”
2. Members with more than one chronic condition will be assigned flags for each condition
3. 24 months (measurement year plus 12-month lookback) used for chronic condition case-finding
4. Member-level values are total allowed amounts for any relevant cost measures and medical/prescription service counts for utilization measures

## Appendix: WA-APCD Covered Lives

At Product go-live, the complete WA-APCD all-payer dataset is comprised of ~4.1 million covered lives.

	Total	Commercial	Medicaid	Medicare Advantage*	Medicare Fee-for-Service**
WA-APCD	4.1m lives	~1.85m lives	~1.85m lives	~320,000 lives	No lives
State of Washington Residents (2017 insured)	6.6m lives	~3.4m lives	~1.85m lives	~400,000 lives	~890,000 lives
WA-APCD % Total	62%	53%	100%	80%	0%

\*Medicare Advantage data includes Pt D prescription drug data for both MA and Medicare fee-for-service coverage. Medicare fee-for-service population to be added to WA-APCD in 2019

## Appendix: Primary Care Attribution

The patient attribution to primary care practitioner (PCP) and assignment of that practitioner to a medical practice, which is an important component of the Product data augmentation, is accomplished through the following steps.

To designate a primary care practitioner, WA-APCD uses CMS's definition of a primary care practitioner plus naturopathic medicine (Appendix: Table 1). The following three specialty types, which are not CMS listed PCP specialties, are not designated as primary care practitioners for the WA-APCD:

1. Homeopathy: based on the WA-APCD data, no homeopaths were categorized as a patient's primary care practitioner due to lower volumes of evaluation and management office visits
2. Obstetrics/gynecology: it's unclear how many women use an obgyn as their primary care practitioner in Washington; to be assessed in future
3. Physical medicine: these physicians, also called physiatrists, concentrate on patients whose medical conditions concern the brain, spinal cord, nerves, bones, joints, ligaments, muscles and tendons. While physiatrists are trained to treat the whole patient it is unlikely that many serve as a primary care practitioner or that physical medicine practices of four or more practitioners operate as primary care practices.

A primary care practitioner is identified by the taxonomy code billed on the claim or by CMS National Plan and Provider Enumeration System (NPPES) data for that provider that matches one of the WA-APCD designated PCP taxonomy codes.

A patient is assigned to the PCP with the plurality of that patient's evaluation and management visits in the most recent 24 month period. If a tie, the patient is assigned to the PCP whom they visited most recently; if still a tie then patient is assigned to the PCP with the highest total claims allowed amount for that patient. Attribution of patients to primary care practitioners uses all data across market segments – attribution is not done separately by market segment.



Once the patient to PCP attribution is completed the practitioner is assigned to a medical practice. This is done using a provider to medical practice roster. If a provider belongs to multiple practices during the time period, the assignment is based on roster information designating the primary practice. In the absence of roster primary practice information, the provider is assigned to the practice where the most current services rendered.

A practitioner may be unassigned to a primary care practice for one of several reasons:

1. No medical practice affiliation records were received from Onpoint's data service for the NPI of that provider (rare)
2. The identified practice did not represent a medical practice (e.g., entity was a hospital department/lab/dentist etc.)
3. The provider had an affiliation to a practice but that practice is comprised of fewer than 4 practitioners each of whom must have a minimum of 150 patient attributed (note that if a practice did include at least 4 providers with 150 attributed patients each, we include every other provider belonging to the practice regardless of attributed patient count)

## Appendix: Primary Care Practitioner Specialty Codes

SPECIALTY_CODE	TAXONOMY_PROVIDER_TYPE	SPECIALTY_DESC	TAXONOMY_SPECIALIZATION_AREA
207QA0000X	Allopathic & Osteopathic Physicians	Family Medicine	Adolescent Medicine
207Q00000X	Allopathic & Osteopathic Physicians	Family Medicine	
207QG0300X	Allopathic & Osteopathic Physicians	Family Medicine	Geriatric Medicine
207QA0505X	Allopathic & Osteopathic Physicians	Family Medicine	Adult Medicine
208D00000X	Allopathic & Osteopathic Physicians	General Practice	
207RG0300X	Allopathic & Osteopathic Physicians	Internal Medicine	Geriatric Medicine
207RA0000X	Allopathic & Osteopathic Physicians	Internal Medicine	Adolescent Medicine
207R00000X	Allopathic & Osteopathic Physicians	Internal Medicine	
2080A0000X	Allopathic & Osteopathic Physicians	Pediatrics	Adolescent Medicine
208000000X	Allopathic & Osteopathic Physicians	Pediatrics	
261QP2300X	Ambulatory Health Care Facilities	Clinic/Center	Primary Care
261QR1300X	Ambulatory Health Care Facilities	Clinic/Center	Rural Health
261QF0400X	Ambulatory Health Care Facilities	Clinic/Center	Federally Qualified Health Center (FQHC)
175F00000X	Other Service Providers	Naturopath	
364SF0001X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Family Health
364SG0600X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Gerontology
364SP0200X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Pediatrics
364SA2200X	Physician Assistants & Advanced Practice Nursing Providers	Clinical Nurse Specialist	Adult Health
363LF0000X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Family
363L00000X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	
363LA2200X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Adult Health
363LG0600X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Gerontology
363LP2300X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Primary Care
363LP0200X	Physician Assistants & Advanced Practice Nursing Providers	Nurse Practitioner	Pediatrics
363AM0700X	Physician Assistants & Advanced Practice Nursing Providers	Physician Assistant	Medical
363A00000X	Physician Assistants & Advanced Practice Nursing Providers	Physician Assistant	